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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,045	12/11/2001	Ramesh Sundaram	S01.12-0881	7113

7590 12/23/2002

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EXAMINER

NOLAND, THOMAS

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 12/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

10/015,045


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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 10/07/02 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.             | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-25 are pending in the application.

Of the above, claims 1-10 are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 11-18, 21 and 23-25 are rejected.

5. ☒ Claims 19-20 and 22 are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

**EXAMINER'S ACTION**

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1. The amendment filed Oct. 15, 2002 has been entered.
2. The combination of the supplemental declaration filed Oct. 15, 2002 and the one originally filed meets the proper declaration requirement.
3. Claims 1-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made **without** traverse in Paper No. 3.
4. Claims 11-25 are objected to because of the following informalities: in claim 11, line 4 “forma” should apparently be -- -- -- form a -- -- -- . Appropriate correction is required.
5. Claims 19-20 are also objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It is not seen how a glide head formed from the glide head array included in the wafer of claim 11 would have further limit the subject matter of claim 11 directed to the wafer per se. Additionally such a single glide head would not meet the plurality of glide heads limitation of claim 11 since only one glide head is formed and the claim thus does not contain all the limitations of base claim 11 as required. I.e., a claim directed only to an element specifically removed from a claim requiring a combination of such elements clearly does

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not contain all the limitations of such a combination claim even if it is referred to as being dependent on such a claim. The dependency is improper. In view of this objection claims 19-20 have not been further treated on the merits.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is meant by “ the thermal transducer ” in line 1 since claim 24 refers to a plurality of them. In line 2 “ are ” is inconsistent with the singular term in line 1. It is unclear whether there is a single magnetoresistive sensor for only one transducer, a plurality with each transducer formed of a respective sensor, or the plural transducers formed from a single sensor.

8. Claims 11-13, 15-16 and 18, 21 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith, Jr. US patent no. 6, 112,401.

Note especially col. 3, lines 49-67; col. 4, lines 41-43; col. 7, lines 1-30 and col. 11, lines 5-18. The surface treatment taught in Smith, Jr. et al is considered to be a form of contouring.

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9. Claims 11-13, 15-18 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Aylwin et al US 5,452,166 cited on the IDS.

Note especially the abstract and cols. 6, line 44-col. 8, line 7. The surface treatment taught in Aylwin et al is considered to be a form of contouring.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over (Smith, Jr. or Aylwin et al) in view of (Burger et al US 6,233,119 or the known suitable wafers disclosed on page 5, lines 18-23 of the specification herein).

Smith, Jr. and Aylwin et al does not disclose the use of aluminum oxide/titanium carbide wafers but such is a known wafer material for similar such systems as evidenced by Burger et al in col. 5, lines 13-16 or applicant's own disclosure referred to above. Use of such would aid in fabrication.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over (Smith Jr. or Aylwin et al) in view of (Voldman et al US 5,771,571 cited in the IDS or Voldman et al US 5,559,051 cited in the IDS).

Smith Jr. and Aylwin et al do not disclose mounting the transducer on a surface opposite the air bearing surface. However, such is a known technique in similar such systems as evidenced by Voldman et al 5,771,571 especially in fig. 5 and col. 5, line 58-col. 6, line 52 therein. Such a disposition would allow the transducer to be better protected. Voldman et al 5,559,051 provides

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similar teachings. The Voldman et al patents are considered combinable with Smith Jr. or Aylwin et al since art related to sliders is clearly relevant to glide heads as seen by their common association.

12. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Smith Jr. or Aylwin et al) in view of Schaenzer et al US 6,071,007, previously cited.

Smith, Jr. and Aylwin et al do not show the use of thermal transducers but since Schaenzer et al show such a use in a similar such system such would have been an obvious additional or alternative inclusion to ease production of thermal asperity detectors. Note especially col. 3, lines 58-62 in Schaenzer et al.

13. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Applicant's arguments filed Oct. 15, 2002 have been fully considered but they are not persuasive. Applicant states that the base references do not meet the claim limitations but fails to specify what particular limitation or limitations are not taught or why the referred to sections of base references do not illustrate one or more of the claim limitations.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Noland whose telephone number is (703) 305-4765. The examiner can normally be reached on weekdays from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Hezron E. Williams, can be reached on (703) 305-4705.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

**Thomas P. Noland**  
**Primary Examiner**  
**Art Unit 2856**



tpn  
Dec. 20, 2002